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Estimation of carbon sequestration rate of urban park with linear and curvilinear design landscape setting (Article)

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Abstract

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The need for urban parks became greater as cities expanded and the urban population rapidly grew. Therefore, having an urban park can facilitate a reduction in GHG emissions by alleviating some of the impacts of this dense development. Trees in the urban parks are an important factors reducing the amount of carbon dioxide accumulated in the urban area. The carbon sequestration rate was calculated with biomass equations, using field data collection, measurements and survey data analysis. This study aimed to calculate, predict and compare carbon sequestration rate of plant materials with linear and curvilinear design landscape setting. The decisive outcome of this study are the optimization of carbon sequestration rate by selecting the right plant material specifications with suitable landscape design setting. The findings revealed that the curvilinear design landscape setting sequesters more carbon per m² than linear design landscape setting. Plants with bigger girth and larger quantities contribute to sequestering greater carbon compared to smaller girth and fewer trees. These findings will become a green practice approached towards building a sustainable environment with better design solutions. © 2019, ALÖKI Kft., Budapest, Hungary.

Author keywords

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1 of 1

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